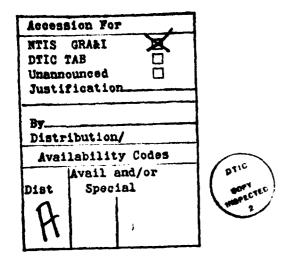END
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AN INTRODUCTION TO AN INTERNATIONAL
LOGISTICS LANGUAGE

Elaine Roman, Capt, USAF
Michael R. Sizemore, 1Lt, USAF

LSSR 43-82

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Over the last few years, increased attention has been given to the need for an unambiguous language in order to develop better communication in the area of Foreign Military Sales. This thesis developed the foundation for a "Logistics Fundamental Language" by simplifying the English vocabulary used within the International Logistics community. The intent is to make International Logistics documents easier to read, understand and use by those customers within the logistics system. This controlled English consists of a specialized vocabulary of approximately 1100 words selected from Foreign Military Sales documents. Additionally, 360 words of the controlled vocabulary are defined using the restricted vocabulary. The final result of this thesis is not a ready-to-use dictionary, but a foundation for future theses to use and complete the dictionary so it can be used within the International Logistics community.

AN INTRODUCTION TO AN INTERNATIONAL

LOGISTICS LANGUAGE

A Thesis

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the Requirements for the

Degree of Master of Science in

Logistics Management

By

Elaine Roman, BA   Michael R. Sizemore, BA
Captain, USAF   First Lieutenant, USAF

September 1982

This thesis, written by

Captain Elaine Roman

and

First Lieutenant Michael R. Sizemore

has been accepted by the undersigned on behalf of the faculty
of the School of Systems and Logistics in partial fulfillment
of the requirement for the degree of

MASTER OF SCIENCE IN LOGISTICS MANAGEMENT

DATE: 29 September 1982

Leslie M. Norton
COMMITTEE CHAIRMAN

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Chapter 1

THE RESEARCH PROBLEM

Introduction

Today the Department of Defense and the United States
Air Force face a challenge of unprecedented complexity within
the area of International Logistics. This challenge has been
created by such factors as:

1. The number of customers that the International
Logistics community deals with,

2. The number of United States aircraft in use and
available for sale to foreign countries,

3. The number and complexity of spare aircraft parts
needed to support United States aircraft in foreign inven-
tories, and

4. The magnitude of training that the United States
is involved in to support the sale of major weapon systems.

These factors combine to create the largest and most
complicated International Logistics mission of its type in
the free world. For example, foreign military sales increased
by some 1500 percent between FY 1965 and FY 1980. For FY 1980
the total foreign military sales package was over $15 billion
(19:2). Sales have been predicted to exceed $20 billion in
FY 1983. It can also be stated that the major portion of all
sales will be spent for subsystems and spare parts.

A major and very important part of this International
Logistics mission is the assistance that must be provided to
those foreign countries that purchase major weapon system
packages from the United States. This aid is provided in the
form of follow-on support, which is defined as "that continu-
ing flow of material supplies which will supplement or eventu-
ally replace the country's initial, twelve-month initial
buy-in of spares and parts [15:6]." The United States is
obligated to provide some level of assistance for every new
weapon system that it sells.

In order to negotiate and implement follow-on support
to allied nations, multiple transactions are required. These
oral and written communications are indispensable for every
agreement.

Due to the involved and diverse nature of logistics,
combined with the international considerations and decisions
that must be made, numerous formal documents are created, each
with its own degree of difficulty. This documentation can
take the form of a Letter of Offer and Acceptance, a request
for Price and Availability, a Discrepancy Report, or numerous
status reports on the progress of the sales. Each of these
documents requires a knowledgeable level of understanding of
the English terms used. Once these official papers are pre-
pared, they possibly can lead to other documents such as
numerous financial and legal forms, computer outputs that pro-
vide updates and status reports, and finally technical orders
which are needed to explain maintenance and other procedures.

Within International Logistics, the United States Air Force has to deal with many different nations, each with its own cultural and educational pecularities. Understanding these national differences leads to a friendly cooperative atmosphere within the context of International Logistics involvement. This involvement paves the way to that spirit of give-and-take which is so important to the cooperation necessary in the sale and continued follow-on support of any major weapon systems sale.

Problem Statement

The current use of standard, narrative English is creating certain support problems within the International Logistics field. The problem appears to be caused by the lack of understanding of the English language used within the context of the forms and documents, such as the Letters of Offer and Acceptance, technical orders, legal and financial reports, as well as update reports in the form of computer printouts. In addition, the English language contains many words which have more than one meaning. This leads to misunderstanding and confusion. This problem is increased in importance because this misunderstanding is not only present at the individual level, but it is also apparent that there is a communication problem between the United States government and the governments of those countries which purchase military equipment and support from the United States. A requirement exists for a basic, fundamental vocabulary and a dictionary based on

this vocabulary.

Scope

The scope of this thesis is limited to the identification of a basic, controlled English vocabulary and the partial development of this vocabulary in the form of a dictionary. Both should resolve the basic communication problem that was identified earlier. This limitation is important because this thesis does not propose to compile a complete dictionary that will be ready for use in the field. The purpose is to establish a foundation in expectation that future student theses will complete the dictionary.

Research Methodology

The first step in our process will be the identification and selection of the basic, controlled English vocabulary. The vocabulary will be selected using the technique employed by National Cash Register (NCR) and the recommendations made by Mr. Ardel Nelson and Colonel Husam K. Abo Ghazaleh in their thesis. Technical nomenclatures, such as specific names for forms, components, and machines, will not be included at this time. Glossary terms, those technical phrases accepted in logistics for which another phrase would have been unsuitable, will be included. A basic vocabulary of approximately 1100 words will be selected. The process that will be used can be summarized as follows:

1. A representative sample of Air Force manuals and Foreign Military Sales (FMS) documents will be selected.

2. Selected sections and/or paragraphs within the above-stated documents will be entered into a computer data bank using a word count program (see Appendix A for printout of program used).

3. The computer will analyze the input and produce a printout of the words that will be used to indicate the number of times each word will be repeated.

4. The list will be manually screened and typographical errors eliminated.

5. Nomenclatures, i.e., names of things, will be eliminated. These terms will be eliminated because they can eventually be represented via a picture or a diagram. This process follows NCR's approach.

> . . . we assume that the reader of these manuals is knowledgeable and trained in his field. . . . Therefore, we don't need to give him definition for nomenclatures. He will be familiar with nomenclatures because of the technical training he has received [10].

6. Synonyms will be identified and grouped. Using a thesaurus, the best word within the group will be selected. However, an attempt will be made to select only one synonym in the group.

7. The remaining list of words will be screened based on:

   a. frequency of use

   b. most commonly used

   c. word was used either in the <u>Compendium of Authenticated Systems and Logistics Terms</u>, <u>Definitions and Acronyms</u>, and/or the <u>NCR Fundamental English Dictionary</u>.

This process will complete the development of the initial
vocabulary. The results can be found in Chapter 3.

The second step will involve the translation of an
International Logistics Center (ILC) document from its origi-
nal narrative version to the new version using only the voca-
bulary listed in Chapter 3. The purpose of rewriting this
document will be to insure the feasibility of using the above
vocabulary when translating current documents and to add any
new words definitely required by the rewrite. One of the re-
quirements we will impose upon ourselves will be to insure
that the document is prepared accurately and its intent remains
unchanged. This will be accomplished by having the controlled
English version proofread by ILC and Air Force Institute of
Technology (AFIT) staff personnel.

Our final effort based on the initial vocabulary will
be to apply trial definitions to approximately 300 words. To
improve understandability, all definitions will be written
using only the controlled vocabulary. The method to be used
is outlined below:

1. Numerous dictionaries and technical glossaries will
be gathered and used as reference.

2. Each term will be analyzed according to the defi-
nitions stated in the above references.

3. A definition will then be written based on those
references that would best fit our use of the word. To avoid
conflict with any of the above stated references, if a defi-
nition is considered unsuitable for our use, an alternative

term will be considered. According to Nelson and Ghazaleh, "Such an attitude will, it is believed, aid in acceptance of the new defined terms and gain industry support for the government effort [14:27]."

4. In some instances, when the definition used by NCR is common to our use, we will use "as is."

Justification

The technique of defining the most commonly used word should eventually produce a nonambiguous, nonredundant and accurate vocabulary. After the completion of the dictionary, it can eventually be used to rewrite the documents and forms used within the International Logistics field. The controlled English language dictionary will serve the purpose of a common language that can be used by the Department of Defense International Logistics and foreign countries in the transactions of any documentation of a major weapon systems sale.

In addition, a question was proposed by Nelson and Ghazaleh, in their thesis, as to the usefulness of a controlled English vocabulary to improve FMS documents. The answer to the question was a definite "yes" (14:69). The overall consensus was that documents are more easily understood when written with the controlled English as opposed to narrative English. The conclusion was that this type of written communication would also be a great asset to our allies in the understanding of International Logistics documents.

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Research Objective

The objective of this thesis is to set forth an introduction to an International Logistics language by utilizing a controlled English vocabulary to compile a dictionary. When the dictionary is completed, it will be used as a guide and reference to write documents and forms used within the International Logistics community when conducting business. Our approach is not to impose a language upon the International Logistics community, but rather to develop a tool that will be voluntarily adopted in an effort to reduce the possibility of misunderstandings.

Assumptions

The following assumptions were made in the consideration of compiling the controlled English language dictionary:

1. International FMS coproduction and Cooperative Supply Support Logistics Agreements will continue into the foreseeable future and there will be an increasing need for standardized data.

2. Interchangeability of technical and technological data will increase in importance as the United States continues to be more involved in coproduction and logistics on an international level.

3. International Logistics support will continue as an important element in the foreign policy of the United States.

4. The English language will continue to be the language most used in the free world in the International Logistics communication field.

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Chapter 2

LITERATURE REVIEW AND PERSONAL INTERVIEWS

In recent years business executives have focused their
attention on policy guidance relative to communication prob-
lems in international companies. The U.S. Army, Air Force,
and Navy are conducting research on the same basic problem.
Their problem has become even more difficult because of re-
duced manpower, decreased entry level skills, and increased
complexity of equipment and weapon systems. The research
studies by these three major branches within the military
have tried to describe the barriers that obstruct effective
communication, but little has been done to establish a founda-
tion for an international logistics language (12:30).

Some international firms such as National Cash Register
Corporation (NCR) and Caterpillar Tractor Company have experi-
enced problems writing technical instructions and maintenance
and service manuals for international customers and subsidi-
aries. The Department of Defense is also experiencing the
same communication problems that these companies are trying
to overcome.

The communication problems have generated an interest
to clarify the ambiguous language of documents used in both
the military and business arena. Both recognize that rules,
guidelines, instructions, and specifications which are not

correctly understood by the intended audience may result in serious economic and social losses. "Reference manuals which cannot be read by mechanics can lead to results that will keep a mortician in business for months [7:28]." Try to imagine an aircraft mechanic who cannot understand the technical orders which contain his repair directions. Is it possible that he could cause the failure of the aircraft? Sadly enough, "communication failures are perhaps more frequent than communication successes in the lives of all of us [20:3]."

The need to improve technical data is common to all. This problem is intensified by standard policy which requires that all technical data required to maintain and operate the equipment be delivered concurrently with the equipment. Thus, an attempt to improve the effectiveness of maintenance personnel falls heavily upon the technical writer (12:27-30).

Fortunately, some information is available that might suggest possible solutions. The first two, though not directly related to the objective of an international logistics language, do contribute to the identification of the problem. These are:

1. The communication barrier,

2. Computers as aids in pinpointing the reading level of printed material, and

3. A foundation for an International Logistics Language.

Since World War II, international trade has grown at an extremely fast pace. Advanced technology has allowed

government and companies to extend their markets; the easing
of trade barriers has allowed them rapid expansion worldwide;
and improvement in transportation has made it all easier.
However, as Haney (8:5) points out, this doesn't mean we are
actually communicating our intended message.

> Quantity, speed and coverage, however, are not the
> only requirements of communication. It is also impera-
> tive that we communicate clearly and precisely. But
> progress toward greater understandability has come
> much more slowly than the technological improvements.

This problem is further compounded by how the receiver
of the message perceives the oral or written message. Dr.
Balhous, of Beckman Instruments, states (5:33):

> . . . the fundamental barriers to international com-
> munication seem to be distance, time, and local customs.
> A person's interpretation of a message is related to
> his total background, experience, and way of life.
> Even people trained to communicate in a common langu-
> age find that their words have different connotations,
> depending on each person's temperament, education,
> experience, and social and economic heritage.

A common barrier is the diverse nationalities that use
technical data. Within the military, the U.S. Foreign Mili-
tary Sales (FMS) program usually specifies that foreign per-
sonnel will be trained to operate and maintain the equipment
which they buy. To accomplish this, the Defense Language
Institute's English Language Center at Lackland AFB, Texas
teaches students enough English to attain a prescribed
English comprehension level (ECL).

> The English Language Center teaches members of the
> foreign military services to comprehend the vast col-
> lection of reading materials, manuals, and other
> instructional devices associated with American
> weapons and military training [17:136].

Training ranges from six to sixty-seven weeks. This training also includes a basic advanced course in technical vocabulary. However intensive this training, further discussions with country managers in the International Logistics Center, AFLC, indicate that misunderstandings do occur (2). Further, the thesis mentioned earlier by Ardel E. Nelson and Colonel Husam K. Abo Ghazaleh states:

> This problem is occurring at all levels of docu-
> mentation, from the initial Memorandums of Understand-
> ing and Letters of Offer and Acceptance (DD Forms 1513)
> down through, and including, Technical Orders and Job
> Instructions [14:7].

The problem of inadequate communication is also the result of inability to write clearly. Dr. Elizabeth Tebeaux suggests that technical writers might profit by avoiding the following common structural weaknesses: wordiness, uncommon words, and excessive use of prepositional phrases as well as long sentences.

> While careful planning, organizing and writing are
> still required, most failures result from poorly
> constructed sentences. Many sentences fail to com-
> municate their meaning because basic rules for achiev-
> ing clear syntax have been ignored [6:244].

The most common mistakes can be grouped into the following general categories:

1. Words having multiple meanings are used without definitions. Many writers fail to put themselves in the position of the recipients. For example, in stating that a message was received from the "Interior", some Congressmen might think that it was sent by the Department of Interior, while others will believe an appropriation committee within

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Congress sent the message since they, too, sometimes are identified by the "Interior" title. So who actually sent the message?

2. The use of multiple synonyms. The use of synonyms when writing does prevent repetition that can lead to boredom (7:30). However, technical/legal documents written in this format can lead to misinterpretations and force the reader to retain more concepts than he needs. Within the Department of Defense, reorder point, level of supply, and procurement are used interchangeably (18:193, 280) and may cause difficulties for beginners as well as the professional in Systems and Logistics.

3. The author uses terms, acronyms, and abbreviations that are unique to him. The use of terms such as "T.O." for technical orders, "CANN" for cannibalization can be easily misunderstood. Words such as "few," "big," and "maybe" are difficult to quantify and can only lead to misinterpretation.

4. The use of multiple names for the same thing is often a source of misunderstanding. Using only the name assigned to an item by its manufacturer causes less confusion among the readers. For example, use F-16 when referring to that particular weapon system. Avoid referring to it as "the aircraft, the fighter or the plane."

These are just a few of the many communication barriers that must be recognized. The Army has conducted numerous studies which identified the "text" portion of technical manuals as the main problem in producing understandable documents.

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"Cut and try" methods have provided some relief in developing readable technical manuals, but no permanent solution has been found (21:6). Colonel John A. McCann, USAF (Ret.), Editor-in-Chief of the Compendium of Authenticated Systems and Logistics Terms, Definitions and Acronyms, states in the preface:

> Prior to the advent of World War II, people engaged in activities, now considered to be within the scope of logistics, had time to learn the vocabulary of their occupation by close association with the hardware and actual operational experience with the process. The tremendous expansion of logistics operation in the past 50 years vastly increased the number of words, terms, definitions and acronyms singular to this effort [11:v].

For years this tremendous vocabulary development has been seen as the principal causes of our inability to clearly communicate (3; 6:10; 10:III). In fact,

> communication problems are so widespread today that psychologists study the effects of not communicating; sociologists study the causes of our lack of success; and lawyers get rich untangling our failures [10:3].

Major David C. Allard, Directorate of Plans, and Mr. Freddie Riggins, Operation Research Analyst, International Logistics Center, AFLC Headquarters, believe that the problem is further complicated by the decreasing number of people who can understand written material. "Even though we [Americans] are educated, our literacy rate averages below an eighth-grade level [2]." In response to this problem, they favored an Automated Readability system to assist the government technical writers so that their product could be understood by the general public. This computer-based system pinpoints the reading level of printed material by recognizing features such

as average word and sentence length, the percentages of simple and compound sentences, along with the percentages of active and passive verbs. Using these statistics, it will calculate approximately what educational level your audience must have achieved in order to understand your message (2; 7:31-32). However, in the International Logistics arena, documents are usually written for a mixed population whose academic background and English knowledge is quite diverse.

Further, these computer-based readability programs are not designed to be used with a precise, specialized vocabulary.

> When applied to technical writing these formulas have no predictive value. If anything, they are likely to turn good writing - writing that is clear, concise, and precise - into poor writing [9:49].

This doesn't mean that technical writers in a particular industry should toss out the concept behind the computer-based system. Rather, they should devise their own system, a system which will allow the technical writer to suit his unique purpose. George Orwell, the English author, suggests the following rules as a foundation for a specialized system:

> 1. Never use a metaphor, simile, or other figure of speech. In other words avoid cliches and commonplace or "hollow" expressions that don't have much meaning.

> 2. Never use a long word where a short one will do. . . . If there are two words that can communicate precisely the thought you wanted, then choose the shorter.

> 3. If it's possible to cut a word out, always cut it out.

> 4. Use the active voice where "applicable." Though, at times the passive voice is required to place emphasis on "what" was done and not on "who."

> 5. Never use a foreign phrase, a scientific word, or

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a jargon word if you think of an everyday English equivalent.

6. Break any of these rules sooner than say anything that's outright barbarous [9:49-50].

Ardel E. Nelson and Colonel Ghazaleh's thesis dealing with the same communication problem proposes the use of "controlled English" for all Foreign Military Sales documentation.

Controlled English is a special version of the English language that:

1. Uses a restricted, defined vocabulary of eight hundred to twelve hundred words, plus technical terms, in which all manuals are written.

2. Uses simplified grammar and syntax to further reduce ambiguity and clarify meaning [14:10].

Controlled English is not different from English because it is basically a simplified form of the English language.

It is a system composed of integral parts, the complete parts are vocabulary, grammar, syntax. It involves the three steps of language simplification, vocabulary limitation and standardization of style and writing approach [14:110, 126].

The research of Nelson and Ghazaleh was based on a similar basic language that had been developed by Caterpillar Tractor Company and National Cash Register Corporation. To date, both companies continue to successfully use their basic language. Mr. Charles T. Brusaw from NCR states:

. . . [B]eing a world-wide corporation, we faced endless communication problems. Our manuals were written solely in English by technical writers who used technical jargon and language that only experts could understand. The whole idea of changing their style seemed impossible. However, the use of this basic

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language has solved the problem. The writings now are simplified for everyone and the writers themselves actually recognize that their work is a lot better [3].

NCR also developed a dictionary of vocabulary terms suitable to their purposes which is written in controlled English. This dictionary has been their main tool in insuring all new documents will be written in controlled English. Without it, the full benefit of controlled English would be lost (3).

Nelson and Ghazaleh's study was based on an analysis and comparison of a written document in four different styles. These were in narrative version, a structured analysis technique, controlled English, and a combination of both controlled English and the structured analysis technique. Their results support the following conclusions:

1. Documents are significantly more understandable when written in controlled English as opposed to either conventional narrative or the structured technique.

2. Documents in controlled English would be preferred to documents in narrative English.

3. Regardless of language group, a change to controlled English will result in more understandable documentation by our allies.

4. . . . [S]uch a conversion would be beneficial to those with maintenance backgrounds as well as acquisition [14:69-70].

Further, Nelson and Ghazaleh recommend that a dictionary be developed containing the controlled English vocabulary and rules. This dictionary could further be used as the basis for training FMS documentation authors.

Chapter 3

VOCABULARY SELECTION

Introduction

This chapter contains the controlled English vocabulary
and the 362 definitions that will form the foundation for the
"Fundamental Logistics Language." As was stated earlier in
this thesis, this is not a complete dictionary, but only a
foundation for future theses to build upon and expand the
dictionary to its completeness and eventually be put into use
in the International Logistic community.

This chapter will be presented in three parts. The
first part will contain the introduction and the rules and
limitations of the dictionary. The second part will consist
of the controlled vocabulary compiled into the dictionary.
The third part will consist of the definitions. This chapter
consists of only 362 defined words, but eventually the entire
section of controlled vocabulary will be defined and, at that
time, the dictionary will be considered complete.

The definitions used in this thesis were selected from
various sources, such as Webster's Dictionary, DataCom Auto
Base, and the Air Force Dictionary. Each word was defined
using the best definition that fit the way the word was used
in the military context. In some instances, words were not
given a definition because of the confusion that such words

created or because there was a better word that could be substituted and used in its place. These words were identified by suggesting another word to use in its place.

In some cases words or phrases will not or cannot be defined. These words are referred to as "nomenclatures." They are words that consist of trade names, names of documents or forms used within the Armed Services, and glossary phrases used in military correspondence. In lieu of defining such trade names, forms and documents, they will be represented via a picture or an example.

When a verb is used, all the tenses of the verb will be identified when it is defined. However, a word that is identified and not used as a verb can be changed to the past or future tense or its plural form by simply adding s, es, ed or ing to the ending of that particular word. However, caution should be used when attempting to apply this rule to the words in the controlled language. By changing the tense of a particular word, it could possibly alter the meaning of the word in the context of the way it is used in the form or document.

Controlled English Vocabulary

a	accurate
abbreviation	acquisition
above	act
accept	action
acceptable	actual
acceptance	active
access	activate
accessory	add
according	address
account	adjective
accounting	adjust
accummulate	

adjustment

administration

advantage

adverb

after

again

against

agency

agent

agree

agreement

aircraft

all

allies

allocate

allotment

already

also

alternate

although

always

amendment

among

amount

an

and

another

any

anyone

applicable

application

apply

April

appropriate

approve

approximate

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area

Arms Control

arrange

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ask

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bad

balance

base

basic

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classification
clause
clean
clear
clearance
close
code
collect
column
combine
come
commercial
commitment
common
communicate
company
compel
compile
complete
component
comptroller
computer
concern
condition
conduct
confidential
conflict
conform
Congress
conjunction
connect
consecutive
consent
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consistent
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container
content
continue
contract
contractor
contrast
control
CONUS
cooperation
coordinate
coproduction

copy
correct
cost
counter signature
country
course
cover
credit
critical
cumulative
currency
current
custom
customer
cycle

D

daily
damage
data
date
day
debit
December
decision
declare
deduction
default
deficient
define
degree
delay
delete
delivery
depend
Dependable Undertaking
deposit
depot
describe
description
design
designate
desire
destination
destroy
detach
detail
determine
determination
dictate
difference
direct

21

directory
discount
discrepancy
discrepant
discuss
disposal
distance
distribute
distribution
divide
do
document
documentation
DoD
dollar
down
draft
drop
DSAA
due
during

E

each
early
easy
economical
edge
effect
effective
efficient
eight
either
element
eleven
eligible
embassy
employ
empty
enable
enact
enclose
end
end-item
enough
enroute
ensure
entail
equal
equalize
equipment
equivalent

error
estimate
ethics
even
every
evidence
exact
example
exceed
excess
exceptional
exchange
execute
executive
exhaust
exist
expect
expenditure
expense
experience
explain
explanation
export
expose
extend
external

F

facility
fail
failure
fair
fall
false
fatigue
February
federal
fee
feedback
field
fifth
fill
finance
firm
first
fiscal
fit
fixed
Fixed Price
flat
fleet
flexible

floor
flow
flowchart
fly
focal
fold
follow
Follow-on Support
follow-up
for
force
forecast
foreign
Foreign Military Sales (FMS)
form
format
forward
fourth
fragile
fragment
frame
fraud
free
Freight Forwarder
Friday
from
front
full
function
functional
fund
fundamental
future

G

gain
gap
gauge
gave (give)
general
generate
get
glaze
global
go (gone)
good (better)(best)
govern
government
grade
Grant-Aid
gross
ground
group

guarantee
guide

H

had
half
halfway
handbook
handle
hang
hanger
hard
hardware
has
hazard
hazardous
head
heat
heavy
here
hereunder
high
hinge
hit
hold
holdback
hole
home
honor
hook-up
horizon
horizontal
horn
hostile
hot
hour
how
however
hunt

I

ideal
identification
idle
if
ignite
illustrate
image
imbalance
immediate
immobilize

23

impact
implement
import
importance
important
improvement
in
incentive
incipient
include
incorporate
in-country
increase
increment
incur
indefinite
independent
index
indicate
indicator
indigenous
indirect
individual
indorsement
induce
industrial
in-flight
influence
inform
information
initial
Initial Spares
inject
input
inquiry
insert
inside
inspection
install
instead
institute
instructions
insurance
insure
integrate
intention
interchange
intercom
interest
interest rate
interference
interim
intermediate

intern
internal
Internal Security
international
interrupt
interval
into
introduction
invalid
invasion
inventory
investigate
Invitational Travel Order
involve
irregular
is
isolate
issue
it
item

J

January
job
join
joint
judgment
July
June
just
justify

K

keep
key
know
knowledge

L

label
lag
land
language
lapse
large
last
late
lateral
latitude
launch

24

law	manifest
lay	Manning Document
leadtime	manpower
lease	manual
leave	manufacturer
legitimate	map
Lend Lease	many
length	March
less	margin
letter	mark
level	market
levy	Mark For Code
liability	MASL
liaison	master
license	match
lift	material
light	materiel
limited	maximum
limits	May
line	means
list	meanwhile
little	measure
LOA	mechanical
load	medium
loan	meet
local	memorandum
locate	merchandise
location	merge
Logistics	message
longevity	met
long-term	method
loose	middle
loss	mileage
loud	military
low	Military Assistance Program
loyal	minimum
	miscellaneous
M	missing
	mission
MAAG	model
machine	modern
made	modify
magnetic	module
main	Monday
maintain	monitor
maintenance	more
major	most
majority	move
make	much
malfunction	multi-
manage	multiple
management	must
maneuver	

N

name
nation
national
National Stock Number (NSN)
natural
near
necessary
negative
negligence
negotiate
neither
net
neutral
never
new
next
night
nine
no
noise
nomenclature
none
nor
normal
north
not
note
notation
notice
notify
noun
November
now
number

O

object
objective
obligation
obtain
obsolute
observe
obstruct
occasionally
occupation
occupy
occur
October
of
off

offer
office
officer
offline
offset
often
OJT
on
once
one
only
open
operate
opportunity
opposite
or
order
ordinary
organization
original
other
otherwise
out
outer
output
outstanding
over
overage
overall
overlap
override
overseas
overt

P

package
pad
page
panel
paper
paragraph
parallel
parent
part
partial
pass
passenger
patent
pattern
pay
peace
Pentagon

percentage
perfect
perform
performance
period
periodic
permanent
permit
person
personal
persuade
physical
pilot
plan
point
policy
possession
possible
post
power
precaution
precede
precision
preparation
prepare
preserve
presentation
President
pressure
previous
price
primary
prime contract
principal
prior
priority
private
process
procure
produce
proficient
profit
program
progress
project
promise
promote
pronoun
proper
property
propose
provision
public

publication
publish
purchase
purchaser
purpose
pursuant
put

Q

qualify
quality
quantity
quarterly
quick
quota

R

radiate
radio
radius
raid
rail
ramp
range
rank
rapid
rate
ration
raw
react
read
rear
reason
rebuilt
receipt
receive
reclaim
recommend
record
recoupment
recover
recur
Recurring Demand
redistribute
reduce
refer
reference
reflect
regional
register
regular

regulate	round
regulation	routine
regulator	run
reimburse	
relate	S
relationship	
release	sabotage
remote	safe
rent	safeguard
reorder	safety
repair	Safety Level
reparables	sale
repay	salvage
repeat	same
replace	Saturday
replacement	save
reply	scatter
report	scene
represent	schedule
representative	scientific
require	scope
requirement	screen
request	search
rescind	seat
research	secondary
reserve	secret
residual	secretary
residue	secure
resistance	security
resource	Security Assistance
respect	Security Clearance
respond	seek
responsible	segregate
rest	select
restore	self defense
restraint	semi-annual
restrict	sensitive
result	separate
retain	September
retention	sequence
retreat	serial number
return	series
reverse	serve
revise	service
revoke	set
revolve	settlement
reward	seven
ribbon	shall
rights	shape
risk	ship
roll	shipment
roster	shield
rotate	shock

28

shop	station
short	stationary
shortage	status
should	step
show	stick
shrink	stock
side	stop
sign	store
signal	strategy
signature	strength
similar	stress
simulate	strike
since	strong
situation	structure
six	subcontracts
size	submit
skill	substitute
skip	such
slide	suitable
slot	summary
slow	Sunday
small	superior
so	supplement
soak	supply
social	support
solar	suppress
Sole Source	surcharge
solid	sure
something	surface
sophisticated	surplus
sound	survey
Source of Supply	suspense
space	symbol
spare	system
Special ADT	
specific	T
specification	
specify	table
speed	tactic
spin	take
spill	tape
split	target
spoil	task
spot	team
spread	technical
stable	technology
staff	tell
stall	temporary
stand	terminal
standard	terminate
state	terms
statement	territory
static	test

29

text	up
than	use
that	utilize
the	
then	**V**
there	
they	value
thing	version
third	violate
this	violation
those	
through	**W**
throw	
Thursday	waive
time	want
title	war
to	weapon
together	Wednesday
top	week
total	what
trace	when
trade	whether
traffic	which
train	will
transaction	wire
transfer	with
transiti	within
translate	without
transmit	word
transportation	write
travel	wrong
treasurer	
treaty	**Y**
trip	
troubleshoot	year
true	yield
Trust Fund	
Tuesday	
turn	
twelve	
type	

U

ultimate
UND
under
understand
unit
Unit Cost
United States Government
Unit of Issue
until

Fundamental Language Dictionary

The following abbreviations will be used in the "Fundamental Language Dictionary" to identify the parts of speech of the words of the controlled language:

(v)	- verb
(adv)	- adverb
(n)	- noun
(adj)	- adjective
(prn)	- pronoun
(conj)	- conjunction
(prep)	- preposition
(art)	- article

These abbreviations will appear immediately after the word that is to be defined. This identification of the way the word is used is based upon the way the word was used in the literature from which it was extracted.

A

a (art) - any one of a type of thing

abbreviation (n) - shortened version of a word used to represent the complete word

abet: (consider using AID)

about: (consider using APPROXIMATELY)

above (adv) - something stated earlier in the same text

absent: (consider using MISSING)

absence: (consider using WITHOUT)

accept (v), accepted (v), accepting (v), accepts (v) - to take something that is offered

acceptance (n) - the act of accepting

acceptable (adj) - something that is suitable

access (n) - the right to make use of

accessory (adj) - to aid in a secondary means

according to (prep) - in agreement with

account (n) - a record of transactions relating to supplies
   and services

accounting (n) - the process of maintaining financial records

accumulate (v), accumulated (v), accumulating (v), accumulates
   (v) - to get and store together

accurate (adj) - something that is correct and has no errors

accrue: (consider using TO INCREASE)

acquisition (n) - the process of procurement and distribution
   to satisfy a system requirement

act (v)(n) - the process of doing; a written document or order
   having the force of law

action (n) - the act of doing something

actual (adj) - related to something which can be identified

active (adj), actively (adv) - refers to something in current
   use

activate (v) - to put in an active state

activity: (consider using ORGANIZATION)

add (v), added (v), adding (v), adds (v) - to increase the
   size or quantity of something

additional: (consider using MORE or ANOTHER)

address (n)(adj)(v) - to direct one's attention to; refers to
   a specific location

adjective (n) - any word used to modify a noun or pronoun

adjust (v), adjusted (v), adjusting (v), adjust (v) - to bring
   into proper state

adjustment (n) - the act of adjusting; result of adjusting

administration (n) - executive branch of the government

32

advance: (consider using FORWARD)

advantage (n) - to benefit or profit

adverb (n) - any word used to modify a verb, or action word

advise: (consider using RECOMMEND or SPECIFY)

affect: (consider using MODIFY or CHANGE)

after (prep) - at a later time or sequence

again (adv) - one more time

against (prep) - contrary to something

agency (n) - an organization that acts in the interest of
    another

agent (n) - a person that acts in the interest of another

agree (v), agreed (v), agreeing (v), agrees (v) - to come to
    an understanding which is equal in meaning or condition

agreement (n) - the act of agreeing; a binding document

aid: (consider using ASSIST or ASSISTANCE)

aircraft (n) - a machine capable of flying

all (adj) - the total of something

allies (n) - a group of nations joined for a cause

allocate (v), allocated (v), allocates (v), allocating (v) -
    to assign for a specific purpose

allot: (consider using ASSIGN)

allotment (n) - to distribute to assign something

already (adv) - started at a previous time

also (adv) - in addition to

alternate (v), alternated (v), alternating (v), alternates (v)
    - to go from one state of action to another, then repeat
    the process

although (conj) - regardless of a specific state or condition

always (adv) - at all times

33

amendment (n) - a correction or addition to a document

among (prep) - within the group

amount (n) - the total number quantity

an (art) - used before a noun to indicate one person or thing

and (conj) - used to connect words

another (adj)(prn) - one more of the same thing

any (adj) - a thing or person that is not specified

anyone (prn) - refers to any person

applicable (adj) - something that can be applied

application (n) - the act of putting something to a special use

apply (v), applied (v), applying (v), applies (v) - to request or seek; to use for a special purpose

April (n) - the fourth month of the calendar

appropriate: (consider using SUITABLE)

approve (v), approved (v), approving (v), approves (v) - to accept something as good

approximate (adj), approximately (adv) - almost exact or complete; something that is near

are: (refer to the word BE)

arm (v), armed (v), arming (v) - to supply with weapons

arms: (consider using WEAPONS)

Arms Control (n) - an international agreement which controls number, type and performance characteristics of weapon systems

arrange (v), arranged (v), arranging (v), arranges (v), arrangement (n) - to put things in a specific order

article (n) - a word used to signal a noun

as (adv) - the same degree or amount

ask (v), asking (v), asked (v), asks (v) - to make a request

assign (v), assigned (v), assigning (v), assigns (v) - to
    give to a specific person, location or office

assist (v), assisted (v), assisting (v), assists (v) - to
    cause to be accomplished more easily

associate (adj) - closely related to something

assume (v), assumption (n) - to take as true

assure: (consider using BE SURE)

at (prep) - in a specific location or time

attach (v), attached (v), attaching (v), attaches (v) - to
    put together and join

attachment (n) - an additional part

audit (n) - to check accounts or records for errors

August (n) - the eighth month of the calendar

authority (n) - the right to do something

authorize (v), authorized (v)(adj), authorizing (v), author-
    izes (v) - permit someone or something to do what others
    are not permitted to do

available (adj) - something on hand or ready to use

average (adj) - represents the middle point

 B

backorder (n) - the quantity of an item ordered which is not
    immediately available

backup (n) - to serve as a substitute or alternate

bad (adj), worse (adj), worst (adj) - failure to reach an
    acceptable standard

balance (n) - to set equal the totals of two sides

base (n) - the installation on which a military force oper-
    ates; the bottom of something that is considered for
    support

basic (adj) - things that are common to all of an item

basis: (consider using ACCORDING TO)

be (v), been (v), being (v), is (v), are (v), was (v), were (v) - the verb "be" in all its forms is used as a helping verb to help indicate time and place or whether something is acted upon

bear: (consider using ACCEPT)

because (prep) - for the reasons of

before (prep)(conj) - in front of something or earlier than the current time

begin (v), began (v), begun (v) - to start something

behalf: (consider using IN THE INTEREST OF)

behind (prep) - to place in back of; also used as a function word to indicate that something lies between one thing and another

below (prep) - at a lower place than something or lower in rank

benefit (n) - something that is to be useful or profitable

best (adj), better (adj) - most productive or the best advantage

between (prep) - something which is in the middle

bilateral (adj) - affecting two sides or parties equally

bill (n) - a listed account of the cost of equipment and services performed or received

Bill of Lading (n) - a list of materials or the contract for movement of those goods

bind (v), binding (v) - to put under obligation

blank (n) - an empty space such as a paper with empty spaces to enter information

block (v), blocked (v) - to stop the progress of something

both (conj) - used as a function word to indicate the involvement of two things

bottom (n) - the lowest place of something or last place in position of rank

branch (n) - a natural section of an organization

breach (n) - violation of a law, obligation or agreement

break (v), broke (v), broken (v) - to separate into parts

budget (n) - amount of money that is available for a particular purpose

business (n) - an activity concerned with the supply and distribution of products

but (prep)(adv)(conj) - with the exception of; to the contrary; except for the fact

by (prep)(adv) - close to something or through something

C

calculate (v), calculated (v), calculating (v), calculates (v) - to estimate or determine the quantity of

calendar (n) - a table of the months, weeks and days of one or more specific year

calibrate (v), calibrated (v), calibrating (v), calibrates (v) - to adjust a piece of equipment to meet a standard

cancel (v), cancellation (n) - to remove; delete or call off some event or happening

capable (adj), capability (n) - to have enough power and knowledge to do a task

capacity: (consider using SIZE or POSITION)

carrier: (consider using TRANSPORTATION)

case (n) - a contract sales agreement between the United States and its Allies

cash (n) - money that is available for immediate use

category: (consider using CLASSIFICATION or GROUP)

cause (v)(n), caused (v), causing (v), causes (v) - to make a specific thing occur

chance (n) - how possible it is for a thing to occur

change (v), changed (v), changing (v), changes (v) - to make something different

chapter (n) - the separate parts of a book or document

37

charge (v), charged (v), charging (v), charges (v) - to give a responsibility to; to delay a payment of services or supplies

charter (n) - a guarantee of rights or privileges from the government

check (v) - to determine the accuracy of a thing

circumstance (n) - a condition, fact or detail

civic: (consider using GOVERNMENT)

claim (n) - a request made by someone for reimbursement because of loss of property

classify (v), classifying (v) - to arrange in a specific order or assign to a specific category

classification (n) - the act of classifying something

clause (n) - a distinct part of writing in a document

clean (adj) - to observe the rules and be free of wrong doing

clear (v), cleared (v), clearing (v) - to remove information, documents or individuals from something

clearance (n) - the act of clearing a thing or someone

close (n) - to bring to an end

code (n) - a system of communication where groups of symbols represent information

collect (v), collected (v), collecting (v) - to secure something such as information or items

column (n) - to position things in a straight up and down line

combine (v), combined (v) - to connect two or more things to become one

come (v), came (v), coming (v), comes (v) - to move toward a specific person, place or thing

command: (consider using ORDER)

comment: (consider using COMMUNICATE or EXPLANATION)

commercial (adj) - relating to a thing designed for sale by all persons

commitment (n) - an agreement or obligation to do something in the future

common (adj) - shared equally with all individuals of a group

communicate (v) - to send and receive information

company (n) - a business or private organization

compel (v), compelled (v), compelling (v) - to cause to do something because of pressure

compile (v) - to generate an object program from a beginning program

complete (adj) - having all the necessary parts

comply: (consider using AGREE)

component (n) - the part or item located within the equipment

comptroller (n) - someone who is responsible for the audit of government accounts

compute: (consider using CALCULATE)

computer (n) - a device that can store, select and process data

concentrate: (consider using FOCUS)

concern (n) - to be of an interest or trouble to someone about something

concurrent: (consider using AT THE SAME TIME)

condition (v), conditional (adj) - to put into a certain state for work or use

conduct (v) - to carry on from a position of authority

confidential (n) - having security status that its unauthorized disclosure could harm United States security

conflict (n) - opposite wants and needs of individuals

conform: (consider using AGREE or AGREEMENT)

Congress (n) - law-making system of a nation

conjunction (n) - a word used to join other words or groups of words (and, or, if, but are conjunctions)

connect (v) - to attach or put together

consecutive (adj) - following one thing after another

consent (v) - to give approval to someone or something

consider (v), considers (v), considered (v), considering (v)
    - to identify available plans so that one plan can be
    selected

consideration (n) - the act of considering something

consist: (consider using IS MADE OF)

consistent (adj) - a standard way of doing something

constant (adj) - to stand firm or not change

constraint (n) - stopped or held back from doing something

constructive: (consider using TO DO GOOD)

contain (v), contains (v), containing (v), contained (v) -
    to hold in something or keep within limits

container (n) - a thing in which material can be held

content (n) - that which is contained within a specific area

contingent: (consider using DEPENDENT UPON)

continue (v), continues (v), continuing (v), continues (v) -
    to perform an act without stopping or start from the
    point from where one stopped

contract (n) - any type agreement and order for obtaining
    service or supplies

contractor (n) - one that contracts to provide a service or
    supplies

contrary: (consider using OPPOSITE)

control (v) - to have power in order to direct someone or
    something

contrast (n) - an individual or thing that shows difference
    when compared with another

CONUS (n) - abbreviation for Continental United States

cooperation (n) - to work together with another for a common
    purpose

coordinate (v) - to put into a common action or condition

40

coproduction (n) - to produce in cooperation with another
country or individual

copy (v)(adj)(n), copied (v)(adj), copying (v), copies (v) -
to duplicate a document without changing its original
form

correct (v)(adj), corrected (v)(adj), correcting (v), cor-
rects (v) - to remove errors

cost (n) - the amount of money that must be given in exchange
for supplies or services

counter signature (n) - to add one's signature to a document
after another individual's signature

country (n) - the land of a person's residence or a political
state or its territory

course (n) - a complete set of instructions about a specific
thing

cover (v), covered (v), covering (v), covers (v) - to place
a thing over another thing

credit (n) - a positive notation on an individual's or
company's account

critical (adj) - any item which requires immediate action

cumulative (adj) - made up of added parts

currency (n) - any form of cash used as a medium of exchange

current (n) - related to a thing being used at the present

custom (n) - conditions imposed on imports and exports by a
country

customer (n) - an individual/country who buys goods and
services

cycle (n) - a series of events or operations that recur
regularly

D

daily (adj) - something that occurs every day

damage (v)(n), damaged (v), damaging (v), damages (v) - to
impair the capability of an item

data (n) - management information such as documents and reports which are required, or information used for reasoning or discussion

date (n) - the month, day, and year on which an event occurs

day (n) - a specified period of time made up of 24 hours

deal: (consider using TRADE)

debit (adj)(n) - a negative notation on an individual's or company's account

December (n) - the twelfth month of the calendar

decision (n) - the selection of one or two or more possible alternatives

declare (v) - to make known one's support for something

decrease: (consider using LESS)

deduction (n) - the amount taken from a thing

default (v), defaulted (v), defaulting (v), defaults (v) - to fail to make a payment when it is due

defective: (consider using DAMAGED)

deficient (n) - lacking in some quality or element

define (v) - to give the exact meaning

degree (n) - the size or measure of quality and quantity

delay (v) - to prevent something from occurring at a specific time

delete (n)(adj) - to make a thing not available by removing it

deliver: (consider using SEND)

delivery (n) - the act of transferring or sending an item to a forward point

depend (v), depends (v) - to need another thing to be available for some result

Dependable Undertaking (n) - a commitment made by a foreign government to pay the cost of supplies and services received or provided

deposit (n) - money given as a down payment for something

42

depot (n) - a location used for the storage, repair, and distribution of supplies and equipment

describe (v) - to define something in words

description (n) - a group of words that define something

design (n)(v), designed (v), designing (v), designs (v) - the details or specifications of an item; to form a plan

designate (v) - to specify or identify; to select for a specific duty

desire (v), desired (v), desiring (v), desired (v)(adj) - to need or require something

destination (n) - the final location a thing is forwarded to

destroy (v), destroyed (v)(adj), destroying (v), destroys (v) - something damaged to the point that it cannot be used

detach (v), detached (v)(adj), detaching (v), detaches (v) - to remove a specific part

detail (n) - a specific part of a complete item or act

determine (v), determined (v), determining (v), determines (v) - to decide on something

determinate: (consider using TO DEFINE)

determination (n) - the act of making a final decision

develop: (consider using MAKE)

deviate: (consider using TO CHANGE)

device: (consider using ITEM)

diagram: (consider using ILLUSTRATION)

dictate (n) - an order by one in authority

difference (n), different (adj), differently (adv) - the amount by which two things are not like each other

direct (adj) - by the shortest or easiest method

directory (n)(adj) - a list of names and other data about a specific thing or group

discount (n) - to offer to sell at a lower rate than the regular price

discrepancy (n), discrepant (adj) - not in agreement

discuss (v), discussed (v), discussing (v), discusses (v) - to communicate ideas with other individuals

disposal (n) - the act of transferring excess property under proper authority

disrupt: (consider using INTERRUPT)

distance (n) - amount of separation from one point to another

distribute (v), distributed (v), distributing (v), distributes (v) - to separate and put something in a special location

distribution (n) - the act of distributing

divide (v), divided (v), dividing (v), divides (v) - to separate into parts

do (v), did (v), done (v), does (v), doing (v) - to cause a specific thing to occur

document (n) - any material on which information is recorded for later reference

documentation (n) - the use of such documents

DoD (n) - abbreviation for the Department of Defense

dollar (n) - a unit of currency used in the United States and other countries

down (adj) - relating to a lower location

draft (v), drafted (v), drafting (v), drafts (v) - to come up with an initial document or plan

drop (v), dropped (v), dropping (v), drops (v) - to allow a thing to fall

DSAA (n) - abbreviation for Defense Security Assistance Agency

due (adj) - that which requires payment

duplicate: (consider using COPY)

duration: (consider using TIME)

during (prep) - within a specific amount of time

F

fabric: (consider using MATERIAL)

facilitate: (consider using TO MAKE EASIER)

facility (n) - something that is built to serve a particular purpose

factor: (consider using CAUSE)

fade: (consider using TO CHANGE)

fail (v), fails (v), failing (v), failed (v) - to miss performing an expected service or function

failure (n) - failing to perform an act

fair (n) - equal considerations between something or someone

fall (n) - a decrease in quantity, size or purpose

false (adj) - something that is not true

familiar: (consider using KNOW or KNOWN)

fast: (consider using QUICKLY)

fatigue (n) - the temporary loss of power to act

feasible: (consider using POSSIBLE)

feature: (consider using FORM)

February (n) - the second month of the calendar

federal (adj) - a form of government in which power is distributed between a central authority

fee (n) - a charge for equipment or services performed

feedback (n) - the return of output through input of information

ferry: (consider using FLY)

field (n) - a particular area in which information is recorded

fifth (n) - indicates series in a position; can also be written as 5th

fill (v), full (v) - to put into something as much as it can hold

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final: (consider using LAST)

finance (n), financial (adj) - a system which includes the
    moving of money or making credit

finish: (consider using COMPLETE)

firm (adj) - to secure or fix in place

first (n) - indicates series in a position; can also be
    written 1st

fiscal (adj) - an accounting period referring to the govern-
    ment business

fit (v), fitted (v), fitting (v), fits (v) - something that
    goes with something to make it functional

fix (v), fixed (v) - to give a lasting or permanent form

Fixed Price (n) - provision in a contract that calls for a
    permanent dollar amount for supplies or services

flat (adj) - the smooth surface of any structure

fleet (n) - a group operated under a single command

flexible (adj) - yielding to influence or change

floor (n) - the level space of a room or bottom surface

flow (n)(v) - the direction of movement; to move in a con-
    tinuous speed

flowchart (n) - a diagram which shows step by step procedures
    or instructions

fly (v), flew (v), flown (v) - to move through the air
    moving people or cargo

focal (adj) - relating to an object or substance

focus: (consider using CONCENTRATE)

fold (v), folded (v), folding (v), folds (v) - to lay one
    part over another part

follow (v), followed (v), following (v), follows (v) - to come
    or take place after something in time

Follow-on Support (n) - continuing support required to main-
    tain a system or piece of equipment

follow up (n) - to do something to completion or cause future action

for (prep) - used to indicate purpose

force (n) - strength created to cause movement

forecast (v), forecasted (v), forecasting (v) - to look ahead at some future event

foreign (adj) - relating to or dealing with other nations

Foreign Military Sales (n) - the sale and delivery of military equipment and services to allied foreign countries

FMS (n) - abbreviation for Foreign Military Sales

form (n) - the structure of something or a printed, typed page with blanks provided for information; when used as a verb, consider using TO MAKE

format (n) - a general plan of organization

forward (adj)- in the direction of what is in front

fourth (adj) - indicated position in a series; also written as 4th

fragile (adj) - something easily broken or destroyed

fragment (n) - a piece of material broken or detached

frame (v), framed (v), frames (v), framing (v) - to construct by fitting the parts of an item

fraud (n) intentional false use of something to gain some
V..

free (adj) - something given at no cost

freight: (consider using CARGO)

Freight Forwarder (n) - a company that groups shipments for transportation from one location to another

frequent: (consider using OFTEN)

Friday (n) - the sixth day of the calendar week

from (prep) - used as a function word to indicate starting point

front (n) - the portion that is before other parts in a
   location

full (n)(adj) - all that is wanted or needed; the highest
   degree

function (n) - the role in which a person or equipment per-
   forms an act

functional (adj) - having a purpose or operational in some
   structure

fund (n) - a sum of money or resources in reserve for a
   specific objective

fundamental (n) - a basic or essential function

furnish: (consider using SUPPLY)

future (n) - time that is to come

Chapter 4

APPLICATION

Introduction

The purpose of this chapter is to apply the controlled vocabulary set forth in Chapter 3. It will specifically show the feasibility of applying the controlled English vocabulary to an existing document without altering the intent of the original version. The document selected to be translated into the controlled vocabulary was the <u>Customer Guide to FMS ROD Processing</u>, Chapter 4, Areas of Special Interest (21:1-4). This document was selected based upon the recommendation of personnel within the International Logistic Center.

Mr. Bill Banks, Chief, Customer Support Services, International Logistic Center, Air Force Logistic Center, Wright-Patterson AFB, Ohio was asked to review the translated version of the document and compare the original narrative version to the controlled English version to insure that the intent of the document remained unchanged after it had been rewritten with the controlled vocabulary. Mr. Banks completed the review with the conclusion that the intent of the document had not been altered at all and furthermore, in most instances, was easier to understand than the original document.

Following is the controlled English version of the <u>Customer Guide</u>. The words and phrases in bold print represent

the changes to the original document. The original document

can be found in Appendix B of this thesis.

Translated Document

AREAS OF SPECIAL INTEREST

EXPLANATION OF "WITHIN ONE YEAR OF SHIPMENT OR BILLING"

Chapter 2, paragraph 1.b. states that RODs will not be accepted
if they are received by AFLC ILC/OOCS "more than one year after
the date when title of the material was transferred to the FMS
customer, or one year after the material has been reported in
a FMS Delivery Listing, DEPENDING ON WHICH IS later."

     a. THE MAJORITY of FMS shipments are made by methods
which involve AN EXCHANGE of material ownership, or title,
from the US Government to the FMS customer country at the time
the material is shipped from the source of supply. So, the
"date of shipment" is OFTEN the "date of title EXCHANGE" and
the two wordings are used interchangeably. "Date of shipment"
(or "shipping date") is used more OFTEN because it is shorter.
However, in those SITUATIONS when the date of shipment and
date of title EXCHANGE are not the same, the date of title
EXCHANGE IS THE CORRECT date which should be used in calcula-
ting the one-year period.

     b. Similarly, the WORDS "date of billing" and "date
material has been reported on a FMS Delivery Listing" mean the
same thing and are used interchangeably. In calculating the
time limit within which RODs must be submitted, the FMS custo-
mer should determine whether the date of title transfer
("shipping date" or "date of shipment") or the SAAC billing
date ("date of billing" or "date material is reported on a FMS
Delivery Listing") is later. ADD ONE YEAR TO THE LATEST DATE.
The result is the latest date that AFLC ILC/OOCS can receive
the ROD for it to be considered.

     c. If a Material Deficiency Report (SF 368) has been
submitted and ACCEPTED, the one year time limit does not apply
as long as a copy of the ACCEPTED SF 368 IS SUBMITTED WITH
the ROD.

GROUPED SHIPMENTS, A COMMON CAUSE OF INVALID RODS

The importance of a COMPLETE investigation to ensure that AN
ASSUMED DISCREPANCY IS A TRUE DISCREPANCY before preparing
and submitting a ROD, cannot be STRESSED ENOUGH. A common
cause of invalid RODs COMES from the GROUPING OF SHIPMENT THAT
ARE USED by the US logistics system.

a. FMS customers will OFTEN receive GROUPED shipments in which MANY items, each applicable to a separate ORDER, are shipped to the customer in ONLY ONE container. OFTEN the external markings on the container and bill of lading will show only one of the many ORDER numbers applicable to material inside the container. This number is called the "lead document number."

b. The FMS customer's freight forwarder is often not AUTHORIZED to open containers. In such a situation, the freight forwarder will record only the "lead document number" for a GROUPED shipment, and only one item will be reported as having been shipped. IF THE CONTAINER IS NOT OPENED QUICKLY WHEN IT IS RECEIVED in the FMS customer country, the COMPLETE shipment may continue to be processed as if it contained only the item represented by the "lead document number." Until the container is opened and its contents checked, the FMS customer will not KNOW that many items, applicable to many ORDERS, have been received.

c. When items, other than that represented by the "lead document," ARE SHOWN on the monthly statement of FMS Transactions, the FMS customer COULD POSSIBLY prepare and submit a ROD BY ASSUMING that material has not been received. The customer IS AT A LOSS by the delay in gaining use of the material until THE PROBLEM IS CORRECTED, AND PREPARING AND PROCESSING RODs THAT ARE NOT NECESSARY. Similarly, TO SOLVE THIS PROBLEM, THE US LOGISTICS SYSTEM USES VALUABLE TIME TO INVESTIGATE RODs THAT ARE NOT NECESSARY.

d. SO AS NOT TO CREATE DELAYS AND ADDITIONAL WORK, FMS customers are ADVISED to open containers and check their contents IMMEDIATELY after the material is RECEIVED in the customer country.

RETURN OF DISCREPANT MATERIAL TO THE US

In some discrepancy situations (e.g., too much material shipped, wrong material shipped), the FMS customer will be INSTRUCTED to return discrepant material to a US ORGANIZATION, and will be advised that credit is to be GIVEN for the material. Shipment of the material to be returned should be made QUICKLY, and AFLC ILC/OOCS should be GIVEN a copy of the shipping document TO SHOW THAT THE MATERIAL WAS RETURNED. The FMS customer will not be GIVEN credit until the source of supply IS ASSURED THAT THE SHIPMENT HAS BEEN RETURNED from the FMS country.

ROD FOLLOW-UP

In most SITUATIONS, AFLC ILC/OOCS does not have ENOUGH information in its RECORDS to CORRECT RODs. This means that the necessary data must be obtained from other organizations in

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the US logistics system. This PROCESS REQUIRES ADDITIONAL TIME. So, FMS customers should use the Monthly Status Report provided by AFLC ILC/OOCS to check on the status of RODs.

a. If follow-up is initiated, it MUST be by letter or message. Do not prepare and submit a duplicate ROD or use another ROD to follow-up on the first. Also, since RODs are not MILSTRIP transactions, do not prepare a MILSTRIP follow-up for a ROD.

b. If a reply is received on SF 364 and SHOWS UP as a closed approval on THE Monthly Status Report, LET ENOUGH time for the adjustment to show up on the FMS Delivery Listing. This listing is the final authority that the adjustment has been processed. If the debit/credit does not SHOW UP on the listing within the next two billing cycles, SUBMIT ANOTHER copy of the completed ROD (BOTH SIDES). ADD in Block 12, "EXPLANATION," "Adjustment has not been received." When this copy of the ROD is received by AFLC ILC/OOCS, the ROD will be ACTIVATED AND CONSIDERED AGAIN.

VALUE OF COMPLETE DOCUMENTATION

The first paragraph on page 2-9 INDICATES that copies of RELATED documents MUST BE ATTACHED TO RODs which are submitted to AFLC ILC/OOCS. The VALUE OF PREPARING AND FURNISHING complete data to enable processing of the ROD by AFLC ILC/OOCS MUST BE REPEATED. Be sure that:

a. All available information is RECORDED on the ROD (Standard Form 364).

b. The ROD is signed.

c. Each ROD is applicable to only one discrepant FOR EACH transaction.

d. BE SURE THAT the document number is complete and accurate.

e. MATERIAL NOT RECEIVED MUST BE EVIDENCED by a statement that THE FMS country has first ASKED the freight forwarder prior to TURNING in of SF 364.

f. WHEN THE MATERIAL IS RECEIVED, FURNISH a copy of the FIRST documentation received and/or complete blocks 5a through 6 (blocks 5 through 7 old form) of SF 364. Block 6 MUST BE COMPLETED.

g. When SHIPMENT instructions are requested for return of material, FURNISH the necessary location and transportation information. Include THE LOCATION of the material, nearest US DOD ORGANIZATION, METHOD of transportation to be used to

FORWARD material to the US LOCATION, estimated cost of transportation and method of payment desired for those transportation costs.

     h.   The ROD has original and six copies.

HOW AND WHEN TO SUBMIT MATERIEL DEFICIENCY REPORT/QUALITY DEFICIENCY REPORT (MDR/QDR)

1.   The SF 368 is to be used for deficiencies such as:

     a.   Hazardous/Critical

     b.   Malfunction

     c.   Design/Maintenance/Material ERROR

     d.   FAILURES

     e.   Computer Program Deficiencies

(The SF 368 is not a request for financial adjustments.)

2.   If a MDR (SF 368) is submitted for one of the above deficiencies, it must be forwarded to the Technical Coordinating Group (TCG) at the Source of Supply responsible for the equipment. If, after REVISING THE DOCUMENTATION, the TCG or Source of Supply DETERMINES a SF 364 (ROD) is in order, the FMS customer will be advised. A copy of THE SIGNED SF 368 must BE ATTACHED TO the ROD WHEN IT IS SUBMITTED.

3.   The one-year time limit for SUBMITTING a ROD is SECURED by SUBMITTING an MDR. The SUBMITTING date of the MDR is used to calculate SUBMITTING time if a ROD IS LATER REQUIRED.

Chapter 5

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

> There is nothing more difficult to carry out, nor
> more doubtful of success, nor more dangerous to handle
> than to initiate a new order of things. For the re-
> former has enemies in all those who profit by the old
> order and only lukewarm defenders in all those who
> profit by the new orders, this lukewarmness arising
> partly from fear of their adversaries, who have the
> laws in their favor; and partly from the incredulity
> of mankind, who do not truly believe in anything new
> until they have had actual experience of it.
>
> Nicolla Machiavelli (1513)
> in The Prince

The purpose of this research was to identify the basic, fundamental vocabulary to be used as a basis for a "Logistics Fundamental Language" of controlled English. As specifically stated in our research objective:

1. To set forth an introduction to an international logistics language utilizing controlled English

2. To create a dictionary to be used, upon its completion, within the international community when conducting business.

This research was initiated with the awareness that the vocabulary selected would not be ready for field use at the conclusion of the research. It is hoped, however, that based on the results of Chapters 3 and 4 that a future effort will insure the realization of implementing such a language. Based

on this premise, the following summary, conclusions and recommendations are made to guide future efforts in the final process prior to actual implementation.

Summary and Conclusions

The objective of this thesis was accomplished in that a basic, controlled English vocabulary was identified which consisted of 1104 words. The initial word selection was made via the automated data system. The Military Assistance Sales Manual, Autocom Data Base and DD Form 1513 were the selected documents from which the vocabulary was obtained. However, it was not always possible to select one synonym from each group of words as stated in Chapter 1. Therefore, it was concluded that these additional synonyms would give documentation writers a certain amount of flexibility and convenience when writing.

Based on the initial vocabulary, trial definitions were applied to 362 words. To improve understandability, the definitions were written using only the controlled vocabulary as stated in Chapter 1.

The controlled English version was read by ILC and AFIT staff personnel to insure that the translated document was prepared accurately and its intent remained unchanged. Neither had major comments for improvement. The controlled English version did not appear unusual, but rather provided a simpler syntax and a consistency of word meaning.

Recommendations

In so far that prior studies (3; 14:69) show that the adoption of controlled English for FMS documentation would alleviate the basic communication problem that was identified in our introduction, then any action taken to complete and implement this language is considered a positive step toward efficient U.S. and foreign negotiations.

In considering these recommendations, future researchers should be aware that the introduction and implementation of a controlled language is quite different, and that resistance to such a change is likely to occur. With this understanding in mind, the following specific recommendations are stated:

1. That the dictionary section be completed and tested.

2. That a specific set of syntax and grammar rules be identified to be used by all FMS documentation authors.

3. That a specific plan of implementation be developed to allow all new documents to be written in controlled English. This process should also include an initial training period to teach FMS documentation writers how to use controlled English.

4. To establish a reviewing committee within each area using controlled English to identify any problems encountered by FMS documentation writers.

Each of the above stated recommendations can be expanded as detailed below.

Dictionary. First, it is suggested that a similar method, as stated earlier, be used in completing the dictionary portion. Based on our experience, the completed "trial" dictionary

should take approximately one month.

Second, editing of this initial dictionary can occur simultaneously with the testing. After completing the initial terms, coordinate with ILC and their documentation writers and encourage suggestions for improvement. All recommendations for new words should be carefully monitored to avoid duplications. If no other word is available, then it may be added to the basic vocabulary.

At this time a determination can be made whether to include technical nomenclatures and their definitions. Two proposals are made based on existing data:

1. Following NCR's approach, if a nomenclature can be represented via a picture or diagram, then use this alternative and do not include these terms in the dictionary.

2. Ghazaleh and Nelson, following the Caterpillar Tractor Company method, recommend definition of technical nomenclature in accordance with structured technique to be included in the basic dictionary. "Quite often it is precisely the definition of these terms that are the source of the misunderstandings and communication failures . . . [14:78-79]."

Finally, test the completed product. Translate an original document to controlled English or use the already translated document in Chapter 4. Analysis should answer the following questions:

1. Which document was preferred by the sample?

2. Was the controlled English version easier to understand than the original narrative version?

3. Was the dictionary an effective tool in reducing misunderstandings?

Syntax and Grammar. According to Charles T. Brusaw, the coordinator for NCR's controlled English program, the proper use of syntax and grammar are in essence the foundation for any specialized system. He defined syntax as "the way words, phrases, and clauses are put together to form an orderly and logical sentence [20:470]," and grammar as "the systematic description of the way words work together to form a coherent language [20:205]." The objective is to improve understanding and increase clarity. Thus, any set of rules that accomplishes this objective is considered appropriate. Some rules are given in Chapter 2 and can serve as a guide. The rules recommended by Ghazaleh and Nelson were those rules used by Caterpillar Tractor Company. Following is a list of those rules (14:76):

1. Make positive (declarative) statements in the active voice.
2. Avoid long/complex sentences.
3. Avoid multiple subjects in one sentence.
4. Avoid too many successive adjectives and nouns.
5. Use uniform sentence structures.
6. Avoid complex past/future verb tenses.
7. Avoid conditional tenses (should, would, might, may).
8. Avoid most abbreviations, contractions, and colloquialisms.
9. Use punctuation correctly.
10. Use consistent nomenclature.

Training and Implementation. Once the basic vocabulary is defined, a training/implementation phase should be initiated.

This phase is the most crucial in assuring complete benefit of controlled English in FMS. According to NCR, some companies have not been successful in implementing a program similar to theirs, mainly because they had failed in their training.

> Resistance towards the use of controlled English was definitely a severe problem. Many of the writers fought me fiercely in the beginning. They saw this as limiting them, taking away their creativity, forcing them to write like children. It wasn't til after we started our training sessions that they realized this wasn't so [3].

The initial training program for NCR took three months to complete. However, training according to NCR is really "on-going," with the first year into the program as the make or break phase.

Training also offers the opportunity to challenge new words. Both the vocabulary and the dictionary must be considered "living" documents. Thus, it is essential that they be maintained current. As experience using controlled English is gained, the basic vocabulary will most likely change. However, any additions or deletions should follow the same initial process. It was during this phase of the program that NCR produced a second edition of their dictionary, adding 250 additional words for a total vocabulary of 1250 words. Changes in the 18 months that followed did not exceed 50 words. It was at this point that they felt confident of their product. Charles T. Brusaw, from NCR, said, "Now, four years later we still make changes, but not as often. Changes are likely to occur when we get a new piece of equipment, but even this

doesn't create much of a problem anymore [3]."

Reviewing Committee. As a follow-on, a reviewing committee should be established to handle any problems that might surface after the initial training has been completed. This committee could be organized as outlined below:

1. Each area/department using controlled English should work as a team. One team member from each area/department should be appointed as team chief.

2. These team chiefs would then form a committee with, if possible, the coordinator of the project as chairperson.

3. Each team chief is the representative for his group. Therefore, if a writer is having problems, the team chief will try to assist in finding an alternate way of communicating the same idea.

4. If the team chief is unable to solve the problem, he will then take it to the committee, which will attempt to solve the problem collectively.

5. If the committee is unable to find a solution which will meet the writer's satisfaction, then an addition to the basic vocabulary must be considered.

Future Expectations. In addition to the expected outcome--to reduce misunderstandings in international logistics support--other benefits as listed below can be achieved:

1. That controlled English will serve to improve not only written communication within ILC, but that it can be used to prepare all technical orders. Technical orders provide maintenance technicians the information they need to do

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the job. However, information in technical orders is not only hard to locate, but is difficult to read and understand. Controlled English can be used to present the same information in a clear and easily understood manner.

2. That controlled English will serve to improve oral communication with foreign allied personnel. Our dealings with Foreign Military Sales does not limit our negotiations to written communication, but rather brings us in direct contact with our allies. Controlled English could serve as a common basic language, reducing ambiguities and misunderstandings between the parties.

3. That documentation written in controlled English will be simpler for everyone, not just the non-English speaker. The quality of the writer's output will be much better. This is mainly due to the fact that all of the "jargon" is eliminated and replaced with simpler English.

APPENDIX A

COMPUTER WORD SELECTION PROGRAM

When loading: start first imput with "; end input with .**"

```
WRDCNT - NAME
1000     DIM A$(2000)
1400     DIM N(2000)
1500     LIM = 0
2000     W$ = ""
2100     LINPUT #10 B$
4000     FOR P = 1 to 81
5000     P$ = MID$ (B$,P,1)
6000     IF P$ = "." THEN GOTO 11000
7000     IF P$ = "," THEN GOTO 11000
8000     IF P$ = " " THEN GOTO 11000
9000     W$ = W$ + P$
9200     GOTO 31000
11000    IF W$ + "" THEN GOTO 31000
11600    IF W$ + "**" THEN GOTO 5000
12000    FOR A = 1 TO LIM
13000    IF W$ = A$(A) THEN GOTO 30000
14000    NEXT A
15000    LIM = LIM + 1
16000    A$(LIM) = W$
17000    N(LIM) = 1
17400    W$ = ""
17500    GOTO 31000
30000    N(A) = N(A) +1
30500    W$ = ""
31000    NEXT P
31500    GOTO 2000
50000    FOR I = 1 TO LIM
50100    V$ = NUM$(N(I))
50200    PRINT A$(I) + "....." + V$
50300    NEXT I
50400    RW #10
```

APPENDIX B

CUSTOMER GUIDE TO FMS ROD PROCESSING

CHAPTER 4

AREAS OF SPECIAL INTEREST

EXPLANATION OF "WITHIN ONE YEAR OF SHIPMENT OR BILLING"

Chapter 2, paragraph 1.b. states that RODs will not be accepted if they are received by AFLC ILC/OOCS "more than one year after the date when title of the material was transferred to the FMS customer, or one year after the material has been reported in a FMS Delivery Listing, whichever is later."

      a. The vast majority of FMS shipments are made by methods which involve a transfer of material ownership, or title, from the US government to the FMS customer country at the time the material is shipped from the source of supply. Therefore, the "date of shipment" is usually the "date of title transfer" and the two wordings are used interchangeably. "Date of shipment" (or "shipping date") is used more frequently, because it is shorter. However, in those instances when the date of shipment and date of title transfer are not the same, the date of title transfer is the proper date which should be used in calculating the one-year period.

      b. Similarly, the phrases "date of billing" and "date material has been reported on a FMS Delivery Listing" mean the same thing and are used interchangeably. In calculating the time limit within which RODs must be submitted, the FMS customer should determine whether the date of title transfer ("shipping date" or "date of shipment") or the SAAC billing date ("date of billing" or "date material is reported on a FMS Delivery Listing") is later. To whichever date is later, one year should be added. The result is the latest date that AFLC ILC/OOCS can receive the ROD for it to be considered.

      c. If a Material Deficiency Report (SF 368) has been submitted and approved, the one year time limit does not apply as long as a copy of the approved 368 accompanies the submission of the ROD.

CONSOLIDATED SHIPMENTS, A COMMON CAUSE OF INVALID RODS

The importance of thorough investigation to ensure that a suspected discrepancy is a true discrepancy before preparing and submitting a ROD, cannot be overstressed. A common cause of invalid RODs stems from the shipment consolidation practices that are followed by the US logistics system.

      a. FMS customers will frequently receive consolidated shipments in which several items, each applicable to a separate

requisition, are shipped to the customer in a single container. Frequently the external markings on the container and bill of lading (manifest, waybill, etc.) will show only one of the many requisition numbers applicable to material inside the container. This number is called the "lead document number."

b. The FMS customer's freight forwarder is often not permitted to open containers. In such a situation, the freight forwarder will record only the lead document number for a consolidated shipment, and only one item will be reported as having been shipped. Unless the container is opened promptly upon receipt in the FMS customer country, the entire shipment may continue to be processed as if it contained only the item represented by the lead document number. Until the container is opened and its contents checked, the FMS customer will not realize that many items, applicable to many requisitions, have been received.

c. When items, other than that represented by the lead document, appear on the monthly statement of FMS Transactions, the FMS customer is likely to prepare and submit a ROD in the mistaken belief that material has not been received. The customer is handicapped by the delay in gaining use of the material until the confusion is resolved, and by the needless effort of preparing and processing the ROD. Similarly, the US logistics system also expends needless effort in investigating the ROD to resolve the confusion.

d. To avoid these delays and unnecessary work, FMS customers are urged to open containers and check their contents promptly after the material arrives in the customer country.

RETURN OF DISCREPANT MATERIAL TO THE US

In some discrepancy situations (e.g., too much material shipped, wrong material shipped), the FMS customer will be directed to return discrepant material to a US activity, and will be advised that credit is to be granted for the material. Shipment of the material to be returned should be made promptly, and AFLC ILC/OOCS should be provided with a copy of the shipping document showing proof of return of material. The FMS customer will not be granted credit until the source of supply receives proof of returned shipment from the FMS country.

ROD FOLLOW-UP

In most instances, AFLC ILC/OOCS does not have sufficient information in its files to resolve RODs. This means that the necessary data must be obtained from other organizations in the US logistics system. This is a time-consuming process. Therefore, FMS customers should use the Monthly Status Report provided by AFLC ILC/OOCS to check on the status of RODs.

a. If follow-up is initiated, it should be by letter or message. Do not prepare and submit a duplicate ROD or use another ROD to follow-up on the first. Also, since RODs are not MILSTRIP transactions, do not prepare a MILSTRIP follow-up for a ROD.

b. If a reply is received on SF 364 and appears as a closed approval on your Monthly Status Report, allow ample time for the adjustment to appear on the FMS Delivery Listing. This listing is the final authority that the adjustment has been processed. If the debit/credit does not appear on the listing within the next two billing cycles, resubmit a copy of the completed ROD (front and back). Annotate in Block 12, "Remarks", "Adjustment has not been received." When this copy of the ROD is received by AFLC ILC/OOCS, the ROD will be reactivated and investigated.

IMPORTANCE OF COMPLETE DOCUMENTATION

The first paragraph on page 2-9 states that copies of pertinent documents should accompany RODs which are submitted to AFLC ILC/OOCS. The importance of careful preparation and providing complete data to enable processing of the ROD by AFLC ILC/OOCS cannot be overemphasized. Be sure that:

a. All available information is entered on the ROD (Standard Form 364).

b. The ROD is signed.

c. Each ROD is applicable to only one discrepant transaction.

d. Assure the document number is complete and accurate.

e. Nonreceipt of material must be substantiated by a statement that FMS country has first queried the freight forwarder prior to submittal of SF 364.

f. Upon receipt of material, provide a copy of original documentation received and/or complete blocks 5a through 6 (blocks 5 through 7 old form) of SF 364. Block 6 is mandatory.

g. When disposition instructions are requested for return of material, provide the necessary location and transportation information. Include the physical location of the material, nearest US DOD activity, mode of transportation to be used to transport material to the US turn-in location, estimated cost of transportation and method of payment desired for those transportation costs.

h. The ROD has original and six copies.

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HOW AND WHEN TO SUBMIT MATERIEL DEFICIENCY REPORT/QUALITY DEFICIENCY REPORT (MDR/QDR)

1. The SF 368 is to be used for deficiencies such as:

    a. Hazardous/Critical

    b. Malfunction

    c. Design/Maintenance/Material Fault

    d. Mishaps

    e. Computer Program Deficiencies

(The SF 368 is not a request for financial adjustment.)

2. If a MDR (SF 368) is submitted for one of the above deficiencies, it must be forwarded to the Technical Coordinating Group (TCG) at the Source of Supply responsible for the equipment. If, after review, the TCG or Source of Supply feels a SF 364 (ROD) is in order, the FMS customer will be advised. A copy of the duly signed SF 368 must accompany the ROD upon submittal.

3. The one-year time limit for submittal of a ROD is protected by the submittal of a MDR. The submittal date of the MDR is used to calculate submittal time if a ROD becomes necessary.

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